Clinical Section

Vaginal Hysterectomy

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I want to thank you for the honor you have done me in asking me to speak on such a controversial subject as vaginal hysterectomy. As you probably suspect, I am rather partial to the operation; but a review of the literature indicates that it appears to be gaining in popularity. In the past there has been very strong feeling against the vaginal removal of the uterus. For example one of America's leading gynecologists has this to say, and I quote: "As compared with a properly executed total abdominal hysterectomy, the vaginal removal of the uterus has no advantages; it cannot be done more rapidly and there is no less shock or loss of blood, though claims to the contrary are made." This statement seems to indicate a lack of familiarity with the technique and its results. I once read that the gynecologist without a working knowledge of vaginal hysterectomy is like an abdominal surgeon who operates for peptic ulcer with no command of gastric resection.

Wayne Babcock S. G. O. 1932 vol. 54 page 193 reports 300 cases with no deaths, and says it is the operation of choice if hysterectomy is required in the presence of haemorrhage or infection, and that the mortality can be practically eliminated. He says further that it is not popular but has been enthusiastically praised by a small group which have used it extensively. Also Heany reports 831 vaginal hysterectomy's with 3 deaths in Am. Obst. J. 1934 vol. 28 page 751.

History of the Operation

The operation is very old, but the first deliberately planned vaginal hysterectomy was done for cancer of the cervix by Langenbeck in 1813. If we remember that the operation was done without an anaesthetic, without assistance, and without the use of artery forceps, and in the pre-antiseptic era and that the patient lived for 26 years, one can well imagine that the operation is one of considerable safety. The technique gradually evolved and by 1880 the operation was fairly well standardized. In 1862 Spencer Wells devised the artery forceps, and in 1885 both Pean and Price introduced the clamp method of vaginal hysterectomy. This method seems to have fallen into disrepute; and Danforth in S.G.O. 1943 vol. 6 No. 4 p. 411 in reporting 517 vaginal hysterectomies by the suture method with no deaths, says this of the clamp method. "This operation in the days of poor suture material and deficient asepsis, no doubt played a useful role, but today the completer surgical methods seem more satisfactory." One could answer this by saying that if it was useful then it should be doubly useful and safe now; and I really feel, as will be indicated later, that the clamp method is more complete. Also Blain in reporting 1564 vaginal hysterectomy's in S. G. O. 1942 vol. 75 no. 3 page 307 "Believes the clamp method increases the possibility of injury to the bladder and ureters and that the operation is blind." I hope to be able to show satisfactorily the fallacy of the statement. Pean makes the first reference to morcellation, which is now a well recognized method of delivering tumors too large to be otherwise removed vaginally.

Comparison with Abdominal Hysterectomy

In comparing vaginal and abdominal hysterectomy; I am influenced in favour of the former only on account of its results in my own personal experience. However I will try to present my reasons in an orderly fashion. In the first place it should be remembered that vaginal hysterectomy is a total hysterectomy, and therefore can only be compared to total abdominal hysterectomy. I think we all agree that total hysterectomy is becoming more popular. And rightly so. On the other hand we know very well that it is not a common practice in Winnipeg, and we each can have our own opinion as to why this is so. I know of only one local surgeon who does the operation more than sporadically. In the hands of an expert and experienced surgeon the increase in mortality of total abdominal over supra-vaginal hysterectomy will only be from 2 to 5%. The total operation is admittedly more difficult and more dangerous, and when combined with a fat abdomen and an amateur surgeon, the operation approaches an atrocity. It is far easier to remove the uterus totally by the vaginal route, and of course obesity in no way increases the difficulty. To illustrate the simplicity of the operation I can tell you the story of one of the rather recent graduates, who had been practicing in the country, and on a visit to the city two years ago saw the operation performed once. I have no idea of his surgical experience but can well imagine that it is small. However, he came to the city about four months ago and told me that he had done quite a few vaginal hysterectomies with good results. Fools rush in where angels fear to tread, and amateur surgeons should not fool with vaginal hysterectomy, but it well illustrates the ease and apparent safety of the operation. My own mortality in 67 cases is nil, except for one with an un-noticed leukaemia who died 10 days post-operatively. J. W. Kennedy reports a

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mortality of ¼ of 1 per cent in over 7,000 operations performed by himself and the late Joseph Price. We must remember that the majority of these operations are done in women in the sixth or seventh decade. My last two patients were over 75 years of age, and made perfect recoveries which speaks pretty well for this operation. As for the post-operative course, I am convinced that I do no major abdominal operation with as symptomless a convalescence. I am not exaggerating when I say that they have no complaints. There is no wound pain. There is no vomiting. There are no gas pains, and very rarely are they unable to void. I must say that they nearly all run a temperature which I will explain later, but of this they are entirely unaware, and if it were not for the visible evidence on the temperature chart the nurses would wonder why the patient was kept in bed. I feel that there is nothing more reprehensible than to operate by the clock, yet I can say that I nearly always complete the operation within 15 minutes and in many cases in less than 10 minutes. In elderly or obese women this rapid surgery certainly minimizes surgical shock and likely contributes to the excellent post-operative course. One of the main advantages, as I see it, is in this absence of shock, which is rather difficult to explain but which is admitted by nearly all authorities. The lack of gas pains is of course due to the absence of intra-abdominal manipulation. Kennedy reports no deaths due to embolism. I believe that this is due to the free post-operative movement of the patient. She gains this freedom because of the absence of a painful abdominal incision, and due to the fact that the diaphragm or abdominal wall are not splinted post-operatively by abdominal pain. I have no idea why the majority of the patients are able to void unless it is due to some interference with the nerve supply to the bladder. Naturally due to the short operating time, and to the fact that the patient is not deeply anaesthetized, and due to the fact that the diaphragm is not splinted, I have never seen a patient develop atelectasis. The absence of intestinal manipulation and abdominal scar preclude the possibility of post-operative obstruction, and Kennedy has never seen a case in his large series. The cosmetic factor of the abdominal scar, of course should not influence us as surgeons, but I would like to bring out one point in this connection; namely that it is much easier to persuade a patient to have a necessary operation if she can be assured that there will be no abdominal incision. Lastly, and likely as important an advantage as any, is the fact that vaginal hysterectomy very effectively cures any co-existing prolapse. In fact prolapse is one of the main indications for the operation.

Clamp Method

I would like to explain now my preference for the clamp method of vaginal hysterectomy as against the more popular ligature and suture method. In the first place it greatly extends the field of usefulness of the operation. One could hardly use the suture method unless there were some degree of prolapse. Furthermore one must keep in mind that the vagina is potentially infected in spite of the most careful preparation, and sutures in an infected field are always a potential danger. In the clamp method the vaginal vault is not closed and is drained for two days with a gauze sponge which will handle any infection which happens to occur in the Pouch of Douglas. The clamp method is naturally more rapid, which of course is an advantage in an old or an obese patient. Also the clamp method produces no shortening of the vagina, which is one of the disadvantages of the suture method. In fact it is my distinct impression that in most cases the vagina is actually lengthened after the clamp operation. On post-operative examination the vault of the vagina seems to be pulled up or tented. And lastly in my opinion the clamp operation is more effective in curing the prolapse. One might think that after removing the clamps, that the unsutured vaginal vault would prolapse, or that the intestines would herniate through the opening. But it just doesn't happen. The theory is that during the two days between the operation and the removal of the clamps that the previously stretched uterine supports contract and draw up the vault and pull the circular opening into a thin slit with its edges in apposition. A propos of this; Curtis and his associates in Chicago in a series of three excellent articles reporting original dissections of the female pelvis, have this to say in S.G.O. 1942 vol. 75 no. 4 page 421, "The abundance of vessels in the region of the Mackenrodt ligaments is so great that surgically interpreted, the important function of supporting the viscera must be credited in a large part to the abundance of vessels, particularly veins." And we know the great tendency for vessels to contract after being severed. When the clamps are removed the tissue in their bite, sloughs, which accounts for the post-operative temperature; and after the discharge of the slough the contraction of the scar tissue further draws up the vaginal vault. This sloughing of the clamp bites is a further advantage in that it makes the operation more extensive which is a consideration when the operation is done for carcinoma of the uterus.

Indications of Operation

In discussing the indications for vaginal hysterectomy I would like to make one point quite definite. This is that prolapse is not the only indication. Many of you will recognize that this is not the view of most writers on the subject. This broadening of the scope of vaginal hysterectomy is to my mind one of the chief advantages of the clamp method bringing into the field, as it does, all the other indications for hysterectomy, except of course those cases in which the vaginal route is contra-indicated or not feasible.

Many of you of course will not agree that vaginal hysterectomy is a suitable, or the best treatment for uterine prolapse, and so while challenging you to point out your objections in the discussion, I will take it upon myself to make an argument against the Manchester-Fothergill type of operation. I do not suppose that any of you favour strongly the Watkins Interposition or the Le Fort operation so I will not discuss them, although most of my arguments apply to these operations also. I take the position that all patients whose symptoms are due to a prolapsing uterus should have that organ removed. Its very weight in the face of the toneless non-elastic senile pelvic supports tends to cause a recurrence. One might say that the Manchester operation acts as a plug and although it relieves the bladder symptoms, the patient still has a relative prolapse the weight of which can cause symptoms and which can dilate the plug and cause a recurrence. One can hardly argue against this weight factor in a partially prolapsed uterus as not predisposing to further prolapse. One must remember that the reduction of prolapse by the Manchester operation is only relative and never complete. If the uterus has descended 10 cms. and the procedure elevates the bladder 6 cms. there still remains a descent of 4 cms. which will increase. I will not labour the question of possible danger from malignancy of the retained organ, but if it is preserved, upon what is its value estimated? It is functionless. In fact hysterectomy at or after menopause has a mild but definite oestrogen conserving effect. (Estrogen sparing effect of Hysterectomy Heckel S. G. O. 1942 vol. 75 no. 3 page 379.) I have heard it said that the uterus is the key-stone of the pelvis basin??? What is the value of a dropped key-stone with weak walls? (the walls being the stretched cardinal ligaments which the Manchester operation does not touch). Vaginal hysterectomy combined with repair of the cystocele, when necessary, has always been perfectly satisfactory in the treatment of prolapse and snatches one more patient from the jaws of future malignancy, and to my mind it has a much smoother post-operative course and can be done more rapidly than the Manchester operation and with less shock. In the Manchester operation it is usually necessary to treat the cervix in some way or other. What way could be more sure both symptomatically and prophylactically than total vaginal hysterectomy?

I have mentioned the heavy patient and also the poor risk patient as indications for the vaginal route in those that require hysterectomy and will mention again a point of great importance; namely that vaginal hysterectomy is a total hysterectomy and is advisable from that point of view alone. It puts into the hands of the relatively in-experienced operator a safer method of total hysterectomy. I also believe it to be the best method by far for removing the remaining cervix after sub-total abdominal hysterectomy.

There are a number of indications for hysterectomy which are rather relative. As a few, I might mention the haemorrhagic climacteric uterus, and mention it again after the not-infrequent failure of deep X-Ray therapy. There is also the undiagnosed uterine polyp and small sub-mucous fibroid. There is the suspicious malignancy with negative biopsy and of course the proven uterine malignancy. There is the case of the prolapsed fibroid and the chronic inversion, both of which can be handled more safely if from the point of view of infection alone by the vaginal route. The question of relative values comes up when one considers that we are prone to treat some of these conditions by x-ray or radium. As far as x-ray is concerned, one must consider the frequent failure to obtain the desired result and the question of mistaken diagnosis. With radium the same set of objections hold good and in addition we must keep in mind the very definite morbidity of radium treatment, particularly if it is adequate treatment. Against this, one must weigh the sure results, minor morbidity and low mortality of vaginal hysterectomy. I strongly question the reliability of diagnostic currettage especially in the case of malignancy and uterine polyp. The question of relative values comes up again when one considers the problem of the chronically infected and torn cervix after the menopause. Both conization and trachelorrhaphy are popular methods of treatment. What percentage of these women are either not cured or subsequently develop malignancy? Vaginal hysterectomy is both curative and prophylactic. The incidence of cancer of the cervix in women who reach the age of 40 is 3%. Is the mortality of vaginal hysterectomy 3%? I say no, and take into no account those women not cured of their infection by the more inadequate treatment.

Complications

In discussing my own cases, I should mention again the single death which was due to leukaemia, a bit of carelessness in the pre-operative investigation. I should also mention one failure to extract the uterus and the operation was completed by the abdominal route. In this particular case inexperience was the cause, but it could just as easily have been due to improper case selection. I do not think I will be embarrassed like that again. There have been no emboli and no pulmonary complications and no post-operative abdominal discomfort. 70% ran temperatures under 100 degrees F. from 10 to 13 days. In the rest of the cases the temperature was normal after the 5th day. Quite a large number had a repair of a co-existing cystocele which is very easy after a vaginal hysterectomy and adds not more than 15 minutes to the operating time. In no case was a perineal repair done at the same time mainly because of a desire to encourage better drainage. This can be done later if thought necessary. I have never done it and have had no complaints. A few of these operations were done under unsatisfactory

surroundings in the country; circumstances in which total abdominal hysterectomy would have been out of the question as would have been the Manchester operation plus suspension. About half the series were done without the proper instruments and the results did not suffer.

Contra-indications are previous pelvic operations or infections which fix the uterus and, because of inexperience with morcellation, large size is for me also a contra-indication.

I would like to discuss the dangers of the operation, but see none. Naturally general surgical experience is necessary and knowledge of the general technique of vaginal surgery is essential. Reasonable care will avoid the bladder and ureters. In fact I feel safer in this respect than I do in total abdominal hysterectomy. I have never torn the broad ligament and am waiting for this to happen. It is an emergency that one must be prepared for but with a plan should be easily taken into control. There is a separation of the slough in the bite of the clamp on about the 12th day which could be followed by secondary haemorrhage, but never has in my experience; and in the 7,000 cases of Price and Kennedy it happened occasionally but was always controlled by morphine and was never an occasion to open the abdomen. In fact it has never been necessary for either of them to open the abdomen for a post-operative complication; and as mentioned before their mortality has been ¼ of 1%.

Technique

One of the great essentials of the operation is the proper preparation of the vagina. This is always done by the same experienced nurse, or if she is not available, by myself. After the external parts are washed thoroughly with soap and water; the vagina itself is scrubbed with a false-tooth brush and gauze, using green soap and water. This part of the preparation takes 10 minutes by the clock. The vagina is then irrigated with two quarts of water and painted with tincture of metaphen.

The technique of the clamp method differs from the suture method first, of course, in that clamps are used. No sutures are ever employed unless a repair of a concomitant cystocele is also done. Lately I have been using a special vaginal hysterectomy clamp but for a long time I used ordinary large non-toothed artery snaps. The cervix is rapidly and thoroughly cauterized and then using strong traction with two towel clips, a rapid circular incision is made with scissors around the cervix just distal to the bladder reflection. A single Sims speculum is the only retractor used throughout the operation, and this is manipulated by the assistant to follow the movements of the operator. This circular incision must be made boldly down to the cervical muscle so that the pericervical structures can be easily stripped off the cervix with the gauze-covered index finger. The finger usually enters the posterior cul-de-sac within 2 or 3 minutes from the beginning of the operation. The uterus is delivered posteriorly by means of towel clips in a hand over hand fashion as soon as is feasible, and in the case of moderate prolapse can be done immediately. The uterus is now held in the palm of the left hand on the surface of the middle finger which is used as a guide to the bladder reflection. This posterior delivery differs from the usual technique and gives the operator complete control of the situation and perfect visualization of the base of the bladder and lower margins of the cardinal ligaments and accounts for the ease in avoiding the ureters; for as the bladder and peri-vesical structures are elevated, the ureters are carried with it off the under surface of the cardinal ligaments. The clamps are applied from above, *i.e.,* at the base of the broad ligaments first so that when rotated into the pelvis they will produce no torsion of the ligament. The first bite of course also includes the utero-sacral ligaments. In many instances only one clamp is necessary on each side, but more often two are required. The clamps give the following advantages: increase the speed, make for more sure control of haemorrhage, increase the scope of the operation by allowing one to include cases in which there is no prolapse, give, in my opinion, more perfect cure of the prolapse if present, and make for greater removal of tissue. Vaginal hysterectomy is much more radical, from the point of view of the amount of peri-uterine tissue removed, than total abdominal hysterectomy; and of course the tissue in the bite of the clamps makes it that much more extensive. I doubt that the Wertheim technique is much more thorough. If it is necessary to repair the cystocele, this is now done. The difficult part of the repair is already completed when the uterus is removed. At the conclusion of the operation one to three gauze sponges, about the size of thyroid sponges, are placed up through the vaginal vault to lie between the clamps and act as drains. Lately, as an added precaution, I have been sprinkling sulphathiazole on these gauze drains although I have no trouble with infection. The drains are removed in 48

hours and the clamps are loosened at the same time. They are removed 4 to 5 hours later by the interne.

There is no post-operative treatment except that no douches are given. The patients are allowed to void on their dressings even before the drains and clamps are removed and no retaining catheter is used now. At first I placed the patients in Trendelenberg position and either used a self-retaining catheter or had them catheterized routinely; but after visiting Kennedy in Philadelphia in 1939, I have discontinued this practice at his suggestion. Kennedy does not loosen his clamps until 72 hours. I have always loosened mine in 48 hours but think I will likely change. The patient is kept in bed for 14 days; never less. She still has a small amount of discharge which stops in another few days, unless a cystocele has been repaired, in which case it lasts longer. At the post-operative office visit it has been necessary, on one occasion, to cauterize the frimbriated end of a tube which was hanging down from the vaginal vault.

Summary

I have tried to discuss, and to give my experiences with a relatively unpopular operation done in a method which has been called unsurgical. It may appear unsurgical but it is safe; and actually it follows the age-old principles of perfect haemostasis, good drainage in the face of potential infection, and a minimum of catgut in a moist infected area. It has a low mortality and the best post-operative course of any major abdominal operation that I do. It is a complete operation, removing all the pathology, and seems to give good results in my small series.

Since this presentation, two additional cases have been done.

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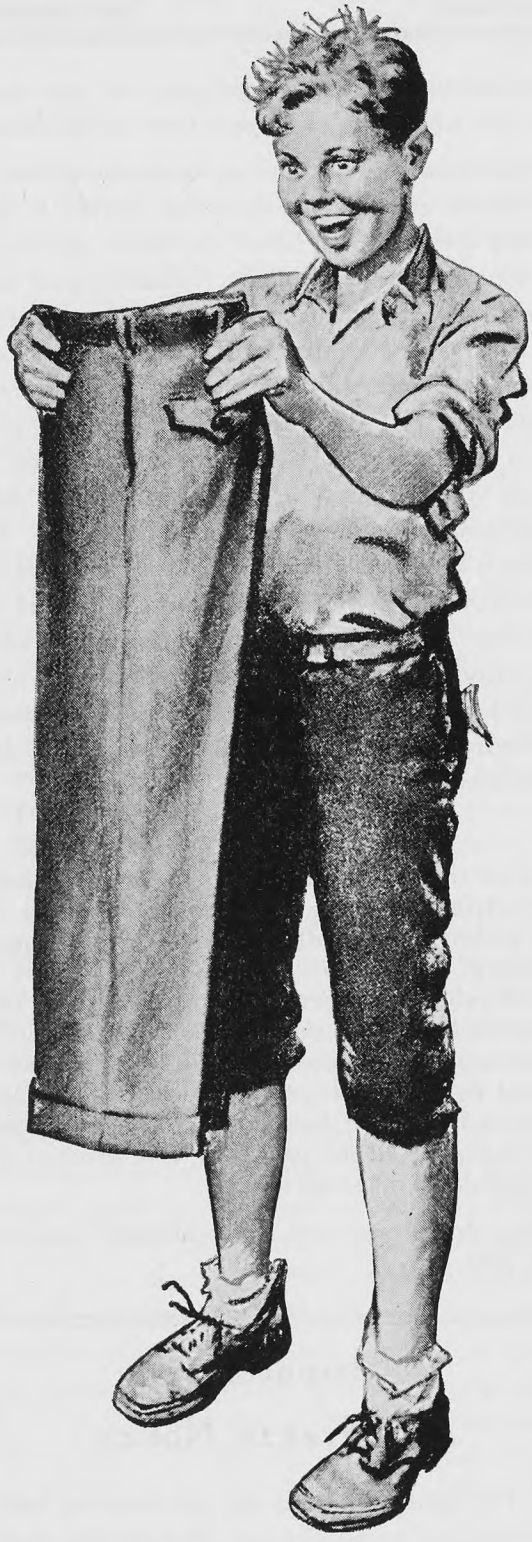

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When we came to consider the question as to whether we should put in a great national scheme or whether we should deal with the problem along provincial lines, we had to give consideration to the various rights that were impinged upon by any national scheme of health insurance that might be introduced. We had the advice of Mr. Gunn, our solicitor, who is familiar with these things, and he pointed out that health insurance cut right across all provincial rights. First of all, let us take education. Assuming that the dominion were to adopt health insurance and administer it nationally, it would necessarily want certain educational rights handed over. It would want the right of setting up standards of education for admission to study medicine, standards governing the study of medicine. It would want the right to register and to license graduates of universities. We are endeavouring to integrate public health with health insurance, and it would be necessary for the dominion to take over the public health bodies of the provinces. Then there is the question of property rights. As I pointed out, these Catholic institutions do not want their hospitals to be taken over by the dominion or by any particular group. Then there are civil rights that enter into this question, such as the right of the individual to choose his own doctor, to choose his own hospital. All of these things were factors that influenced us in drawing up the type of plan that we have for presentation to you.

After all of these discussions had taken place, you know that the Canadian Medical Association passed a resolution approving of health insurance, not of the particular plan that we had drawn up, but approving of the principle. That was something of importance. Before that was done, however, we felt that it was necessary to consult lay bodies as well as the professional bodies. The professional bodies might possibly have a bias in this thing. So we called in labour and obtained their views. Labour would prefer a national scheme, but is quite willing to accept the provincial plan, administration along provincial lines with dominion assistance. You will find at the back of this report a submission of each one of the various bodies that came to us and made submissions. Agriculture was called in through the Federation of Agriculture. Agriculture is very keen on a national scheme. Agriculture wants the major part in administration. Agriculture wants to place the medical, dental and other professions in a subsidiary position, whereas we feel that they should be equally represented in the administration. We think it is only fair that that should be the case. Industry was approached but did not make a submission. We also had submissions from the women's organizations throughout Canada—the National Council of Women, the Catholic Women's League, the Federated Women's Institutes of Canada, La Federation des Femmes Canadiennes Francaises. The list of them is here. I think that is what Mr. Mackenzie has submitted to me. Then we have the Canadian Life Insurance Officers Association. They have expressed themselves as being willing to help us in regard to public health, the preventive end, but they are not interested in medical care, and I cannot apparently convince them that the two are one. Our difficulty in the past has been this. The doctor has been interested in a case, in an operation. He knows nothing about statistics. He knows nothing about morbidity and mortality in the country. The hospital is interested in hospital statistics only for the purpose of comparison with other hospitals. The only people who study statistics in Canada are the public health officials. The public health officers have always been handicapped not only because of finances but because they have not had enough workers. We put in an amount in the bill to help young people to study public health. There has always been that handicap. So we propose under this scheme to bring the doctor into the preventive field. We want him as an adviser of the family, the medical adviser and counselor. We want him to be responsible for the family when the family is apparently well. Whether we will succeed in doing that or not, I do not know. We want him to go into the family and examine the children, to examine them at school or wherever he can find them and see that diseased tonsils are taken out; to see, if the child is suffering from malnutrition, that it is properly fed; and to see, if the child needs an X-ray, that an X-ray is given that child. We have got to begin with children. We have got to build them up if we are going to have a virile people; and in order to do that we have got to bring the medical profession in with us, and we have got to have their fullest and most complete co-operation.

That is the situation, Mr. Chairman, in regard to the studies that have been made in regard to health insurance. If it is your desire and you wish me to do so—although Mr. Mackenzie covered the field very well, I thought, at the last meeting—I might outline briefly the plan that we have drawn up. I do not know if that is your desire.

The Chairman: Yes, it is.

The Witness: There are many types of health insurance, as I indicated at the outset, but there is

only one type of health insurance that is of real value to a nation, and that is that type of health insurance which reduces morbidity and mortality, creates positive health and builds up a healthy people. We have tried under this dominion and provincial type of plan to produce that particular type of health insurance. We do not know whether we have done so or not. We feel that public health therefore and medical care should be one. Now, we think this; we go rather far, perhaps further than the provinces may sometimes be willing to go with us. We feel that the whole thing has got to be applied to all of the people of Canada, not to a small group. I am afraid I am tiring you, Dr. Bruce. However, the subject is so important that I will not make any apologies for it. The chairman in a moment of weakness suggested to me that I had two hours in which to present this subject and I am afraid I am taking advantage of you, sir, and of your committee.

We feel this, that this plan should be applied to all of the people of Canada. We think that is a fundamental and basic essential.

There are certain provinces which think that this should be limited only to people of small incomes. Why is health insurance made compulsory in most countries? In order to provide sufficient funds. Why should we give certain privileges to those who have money? Why should they not be brought into this field? Do they not need public health and preventive medicine as much as anybody else? Does the parent with money pay much more attention to his child until the child is ill than does the man with the small income or of no income? He does not. He has got a responsibility to his family; in so far as health is concerned he can discharge that responsibility by provision of preventive services and medical treatment for his children along the lines that I have outlined. So we say that first of all it has to be compulsory because voluntary schemes have at all times been a failure. They have been a failure because there has not been sufficient money; because they have always been restricted in certain particulars; they have been applied only to small groups. They have had no influence whatsoever upon the health and the welfare of the people of the counry, so that it must be compulsory and it should take in all the people.

Dr. Jackson: Mr. Chairman, I can speak, of course, only for myself on this particular subject; but as it appears to me this is one of the essential things we have been lacking in our communities for the last few years. We attempted in Manitoba, about three years ago, to ascertain the amount of physical disability among our teen-aged members of the high school, and the results we got were simply appalling. We are indeed glad to see there is some consideration being given to an Act along this line, because we feel it will be all to the good. We would like to see some provision, however, if it is possible, whereby in the course of the examination of those young people the defects that are found can be remedied. Our difficulty is now, due to lack of finances of the individual, and due to the scarcity of medical care, to get the defects which are found remedied; in other words, to put people in a fit condition to take full advantage of this plan of physical fitness. We think in Manitoba it is a very desirable thing.

Dr. Heagerty: Well, in considering the question of physical fitness we had in mind the development of the individual. We have taken into consideration the physical defects as they were found in the study made in Manitoba. There, I understand, over 3,000 children were examined and 70 per cent were found to be physically defective. Under the Health Insurance Act preventive medicine will be the big factor in preventing physical defects, so we did not make any provision for that in the physical fitness plan. What we had in mind there was the physical, moral and mental development of the child along the lines that have been in force for so many years in Europe.

Now, with regard to the correction of physical defects that have been found, that will be looked after. We have made provision, however, for the correction of physical defects that can be corrected through physical exercise and all that pertains thereto, so that it is a straight physical fitness bill that bears no relation to the other.

I wonder if I may be permitted, Mr. Chairman, just to revert for a moment to the discussion on the industrial concerns? We have dealt with the subject of those industrial concerns from the standpoint of medical care. I wonder if you would keep that in mind. Dr. McCann used the words 'health services.' That does not cover, I am sure, what we had in mind; that is, medical care. Those firms do not provide preventive medicine and I want that understood. Perhaps I am talking too forcefully now. The primary object of this whole plan is the prevention of disease and as I said at the outset in my preliminary remarks we want to build up a strong people and to create positive health. If we are concerned only with medical care then it would not be a matter of great importance whether or not those concerns continued in existence; but it must be remembered that under health insurance all the people who are now receiving medical care under those plans will be entitled to the full and complete and direct public health prevention services which will be brought into effect under this Act and which are not now in existence.

Hon. Mr. Mackenzie: Mr. MacInnis mentioned a moment ago the question of the cost of medical care in Canada. My recollection is it is about $240,000,000.

Dr. Heagerty: The estimate made in 1935 was $240,500,000 odd. That represents the cost of illness in Canada at the present time, but it includes many

things that will not be included in health insurance; for example, there are the private rooms in hospitals. An individual will not be entitled to a private room except in an emergency. Then there are the semi-private rooms. If an individual wishes a semi-private room he will be obliged to pay the difference.

After a very complete study the cost of illnesses in various countries and the study of the cost of health insurance, we have, as I indicated at the last meeting, I think, ascertained that it will cost us $18 to provide medical care, $3.60 for dentistry, making a total of $21.60. But in addition we must make provision for the children; we must find $21.60 for the children, and that will require $26 altogether.

We have made a very close study of it. We have, of course, had many criticisms that have not been based upon statistics. Many guesses have been made in regard to the cost of illness, but we believe that our studies are sound and are based upon sound evidence and that we have provided sufficient money.

Hon. Mr. Mackenzie: I saw some criticism outside about the administration cost being too high. Your cost is roughly 10 per cent?

Dr. Heagerty: We have deliberately estimated all our costs high because we did not wish to deceive the provinces in particular. We wished to know what the costs will be. In some of the plans that are being administered in Canada the cost is 10 per cent. I estimated originally that the cost would be 6 per cent, and I believe the Hollinger representative called my attention to the fact that that was very low, but we think that 10 per cent will provide adequate money, and for administration we think it is too high, as a matter of fact.

Mr. Mayhew: Mr. Chairman, when Mr. Watson was giving his evidence the other day at page 98 of the report he said, in fact, no actuarial issue is involved in this plan. I wondered on what basis he is basing those estimates. It think it is probably too late to explain it right now, but I think it should be explained further because it leaves to anyone reading the report the belief that the amounts arrived at were purely guesses.

The Chairman: Can you explain?

Mr. Watson: There is no difficulty whatsoever in answering that question. The figures arrived at—I had nothing to do with them, I may say—were largely arrived at by statistics, pure statistics. Although actuaries have to use statistics, in the ordinary sense the statistics involved in ascertaining the cost of medical services in Canada do not involve any actuarial issue. In fire insurance there are no actuarial issues because it is a short-term contract and there is nothing but pure statistical problems involved. But actuarial issues are involved in long-term contracts like life insurance or sickness insurance and unemployment insurance, where there is a complicated formula and rather a long-term contract as well, because the benefit depends on the employment record for five years and on the claim record for three years. But all those issues are very different in health insurance; they do not arise.

Mr. Mayhew: If you are giving specific benefits there ought to be some basis on which they would be arrived at; if not, you will give the impression to the people that if you do not have money enough under your present plan you would lessen the amount of services that you would give to the people or increase them according to the amount of money that you have on hand.

Mr. Watson: Mr. Chairman, there is no way in which actuarial technique or procedure or anything that an actuary can do which will control events. Furthermore, notwithstanding that we have put in this bill it is still very general and it may well be that when it comes to be incorporated by the provinces, each province may have certain modifications to put in, so it would be extremely difficult to determine now, with benefits more or less indeterminate, what the cost would be. There is another difficulty and it is this, that the costs will probably vary a great deal from province to province. I think it would be safe to say, perhaps, that in Saskatchewan and Alberta the population averages a good deal younger than in some of the other provinces and probably a good deal healthier for the reason the people who move that way are usually healthy people and therefore their costs will be a good deal lower than in some of the older provinces where the population is older. There are other reasons that will make for higher costs in some provinces. I should think there might be a difference as wide as 35 per cent between the cost in the lowest cost province and the cost in the highest cost province. These issues are certainly not actuarial issues; they are quite beyond the sphere of actuarial technique, where an actuary might be of some help. If I had undertaken to do anything in regard to cost I should have had to inform myself concerning the work of the Bureau of Statistics, and probably learned things that the Bureau of Statistics already knows which, after all, are not actuarial matters.

The Chairman: Dr. Heagerty, have you any comment to make?

Dr. Heagerty: I do not wish to repeat what I have said, but I should like to point out some of these costs for your information. This is an estimate of distribution cost of medical benefits under draft bill for health insurance. Now, these figures are what is being paid, I understand, in the United States and Canada for medical care. In the United States the percentage of total cost for the doctor is 42 per cent of the total, that in Canada we have estimated at 44 per cent of

the total cost. That represents $9.50 per capita for the physician, or a total of $106,485,500. For hospitalization, exclusive of capital expenditure, in the United States the percentage of expenditure is 16.3, in Canada 16.7, or 3.60. That will be $3.60 per insured person. Now, these figures are exact figures. In Canada last year there were 13,000,000 hospital days with a few days extra. There are eleven and a half million people in Canada so we estimated at least one day hospitalization. That will be 3.60 per capita with a total estimated cost of $40,352,400. Nursing amounts o 8.1 per cent in the United States and 8.1 per cent in Canada. The per capita cost is $1.75, with a total cost of $19,615,750. Medicines, drugs, serums, vaccines, appliances, amount to 12.9 per cent in the United States, and 11.8 in Canada. That works out to $2.55 a head, which I think is fairly high—at least so I am told after discussing it with members of the pharmaceutical association. That gives a total of $28,582,950. Now, laboratory services are not very high, 2.2 in the United States, 2.8 in Canada, making a total of .60 per capita or a total of $6,725,400. Dentistry in the United States, percentage of cost is 18.5 per cent, in Canada 16.7 per cent, $3.60, making a total of $40,352,500. You cannot provide health insurance for less than that and certainly it should not cost more than that.

Mr. Donnelly: Mr. Chairman, we are all very much interested in this bill. We realize the importance of health insurance, but the question in my mind, and I think the question disturbing the minds of the public more than anything else is how much of this money is going to be put up by the federal government and how much is going to be put up by the provincial governments and how much by the individual. That is what everybody is asking now. How much is it going to cost, or what is it going to cost the provinces and the individual? If any of these men here can give us an estimate at all of that I am sure we would all like to hear it.

Dr. Heagerty: I think, Mr. Chairman, it would be necessary to have reference to the presentation that was made by Mr. Mackenzie at the first meeting. If you will refer to that you will find that the advisory committee have not attempted to set down in hard and fast figures, but has indicated the cost and also indicated the various ways in which that cost may be apportioned as between the dominion and the provinces. That is a matter to be worked out, I take it, by the provinces after consultation with the dominion. All that we could do is indicate the cost and then refer it to the several governments to decide how the costs will be apportioned. It is not possible for the advisory committee to arrive at a final decision in regard to that question.

Editorials and Association Notes

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National Contributory Health Insurance

A special Parliamentary Committee on Social Security is sitting in Ottawa receiving evidence from various groups of Canadian citizens. To date, 7 pamphlets have been issued giving "Minutes of Proceedings and Evidence" before this special committee.

In this issue of *The Manitoba Medical Review* are extracts from "Minutes of Proceedings and Evidence." It is hoped to continue similar material in future issues of the *Review.*

However, these extracts are only a part of the evidence submitted. Copies containing all the Minutes and Proceedings of Evidence are on file with the secretary of your District Society. It is hoped that as many members of the Medical Profession as possible will avail themselves of the privilege of reading the proceedings in their entirety.

Many medical men wonder why so much ado about Health Insurance even before the Bill is introduced into Parliament. We have it upon the authority of our President, Dr. Archer, that Health Insurance is the most important problem that has confronted the profession since Confederation.

Dr. Archer is very keen upon medical men in each Province forming groups to study Health Insurance from every angle.

With the Secretary of each District Society and the Central Office of the Manitoba Medical Association in the Medical Arts Building is a copy of the Federal National Contributory Health Insurance Act without financial provisions. This Act comprises some 168 pages and as yet we are unable to send a copy to each member of the profession in the Province.

Please take time, when close to the Office of the District Society, drop in and acquaint yourself with the provisions of this Act.

Don't be discouraged if you cannot grasp all the essential features of the Act upon first perusal. The Act was drawn up by a number of experts including keen legal minds. The latter are more precise in the choice of words than our profession. The wording of the Act is not haphazard. The words are put there by choice by men skilled in the meaning and use of the English language.

In addition, a Federal Act has to apply equally to all Provinces. That is one of the reasons why a Federal Enabling Act is proposed to deal with Public Health and Preventive Medicine leaving the Provinces to work out details between the public and the profession upon curative medicine.

It is common knowledge that the standard of professional care of patients varies widely throughout the Dominion. This thought is applicable to medical practice in rural and urban centres. As to the costs of the proposed scheme it is estimated that there may be a difference as wide as 35% between the cost in the lowest-cost province and the cost in the highest-cost Province.

If you are unable to read the National Contributory Health Insurance Act at your District Society, endeavor to make a point of reading "A Submission Respecting Health Insurance," presented to the Special Committee on Social Security of the House of Commons as contained in the May issue of the *Canadian Medical Association Journal.*

Your Executive honoured me as Chairman of the Provincial Committee to study National Contributory Health Insurance. I hope that members of the profession will take the trouble to submit, preferably to their District Society, or to the Central Office of the Manitoba Medical Association in the Medical Arts Building, Winnipeg, concrete suggestions as to the successful working out of Health Insurance that will enable this Committee to bring in a report at the Annual Meeting that will be helpful and constructive in relation to the problem of National Contributory Health Insurance.

On behalf of my Committee, in anticipation of the shower of friendly suggestions that will rain upon the Secretaries of the various District Societies — many thanks.

—D. C. Aikenhead.

Abstract

Aminophyllin in Status Asthmaticus

Two papers, the one by Hermann & Aynesworth in J. Lab. Clin. Med., 1937, 23, 135-148, and the other by Greene, Paul & Feller, J.A.M.A., 1937, 109, 1712-1715, deal with the use of Aminophyllin (in the B.P. as Theophylline Ethylene-diamine) intravenously in the treatment of "status asthmaticus" in adrenaline-resistant cases. They report 75% prompt and complete relief, and, more amazingly, a return to adrenaline-susceptibility in 90%. Dosage was either 3.75 or 7.5 grains of the drug. (Ampoules of both sizes are available locally, but the total volume may be either 2, 10 or 30 ccs.) The one pair of workers used 10 ccs. as final dilution, the other group preferred 30 ccs., and I believe myself the latter would give rise to fewer side-actions. Some cases responded to 3.75 grains, but most required 7.5 grains. Both cardiac and bronchial asthma responded. No. 22 needle was used.

In 6 years' work, involving over 120 cases, no fatalities resulted and reactions are described as "only slightly unpleasant." The reactions are listed as follows:

1. Feeling of heat in the skin of the face.
2. Sensation of burning in the eyes.
3. Nausea and vomiting.
4. Tremors, mild and fleeting convulsion.
5. Sense of constriction in the chest.

1 and 2 are fairly common, 3 occasional, 5 rare and 4 very rare. Personally, I believe 4 would be eliminated entirely by using the 30 cc. dilution. If restlessness or excitement occurs, phenobarb. is efficient. —M. J. Ormerod.

Order Sutures Now

The Health Supplies Committee of the War Production Board warns that sutures as well as other hospital supplies and scarce drugs imported from the United States are allotted to Canada quarterly, and so should be ordered before stocks get low, as late orders sometimes cannot be filled.

Personal Notes and Social News

Dr. and Mrs. Murray Campbell of Selkirk, Man., are receiving congratulations on the birth of a daughter, at Winnipeg General Hospital, May 13th, 1943.

◈ ◈

Dr. and Mrs. W. I. Easton of Selkirk, Man., have left by airplane for a two weeks' vacation at the Pacific Coast.

◈ ◈

Lieut. Duncan L. Kippen, R.C.A.M.C. and Mrs. Kippen are celebrating the birth of a son (Duncan Earl) on May 2nd, 1943, at the Winnipeg General Hospital.

◈ ◈

The honorary degree of Doctor of Laws was conferred on Dr. H. M. Speechly at the Annual Convocation of the University of Manitoba, held on May 14th.

◈ ◈

Major M. B. Perrin, R.C.A.M.C., surgeon specialist to the army reception centre of M.D. 10, has been transferred to Fort Osborne military hospital.

◈ ◈

Dr. and Mrs. Kahanovitch of Elgin, Man., are receiving congratulations on the birth of a son, on May 12th, 1943.

Dr. Burns Walker has left Winnipeg for the Pacific Coast where he intends to reside in the future.

◈ ◈

Major A. A. Klass, R.C.A.M.C., formerly of Camp Shilo military hospital, has been transferred to the army reception centre of M.D. 10.

◈ ◈

Dr. and Mrs. John A. Swan of Bissett, Man., are receiving congratulations on the birth of a daughter, at the Winnipeg General Hospital, May 21st, 1943.

◈ ◈

Lieut. William Reginald Govan, son of Mr. and Mrs. Eben Govan, of Winnipeg, was married Saturday, May 29th, to Louie Virginia, youngest daughter of Mr. and Mrs. Frederick William Leistikow, of Moose Jaw, Sask.

◈ ◈

A patient received an indecipherable prescription from his doctor. After it had been dispensed by his druggist it was returned to him. For several years he used it for a pass to the baseball park, for a liquor permit, as a license to practice chiropractics, then he was arrested for being in possession of an enemy code message.

Health Insurance—Is It Your Concern?

From the report of an address given by Carl E. Berg, General Representative of the Trades & Labor Congress of Canada, in Winnipeg on Sunday, May 23rd:

(*The Free Press,* May 24, 1943)

"In our opinion those who provide the funds, namely, the government, employees and employers, should control the national council in the matter of representation,' he explained. "Labor needs to be assured that the primary purpose of a health insurance act is to operate for the benefit of the contributors and not entirely in the interests of the medical profession. In our opinion the proposed bill is a closed shop agreement between the government and the union of medical practitioners, not only covering the employment and salaries to be arranged by them but full autonomy in hiring and firing including administration, and all that it implies in giving full discretion to the membership of the medical association in the giving or withholding of benefits to the citizens who are providing the funds.

The congress recommended that the proposed bill be entirely reconstituted to take control away from the medical profession and place it in the hands of the contributors."

From Health on the March a plan of national health insurance submitted to the government by—The Canadian Federation of Agriculture, 1943:

"Principle No. 14 advocates that health insurance shall be based on the schedule of fees as laid down by the medical profession of each province. The average citizen is amazed that any one group should assert such a principle. Nobody proposes to turn over medical services to the control of politicians. Nobody contends, for instance, that a board of aldermen should decide when to operate for appendicitis. The practice of medicine, nursing or dentistry is the responsibility of the professions concerned. But the question of how these services shall be paid for is very much the concern and responsibility of the public."

"Dr. E. A. McDonald, when he was president of the Toronto Academy of Medicine, in 1933, suggested a State Medicine Plan to the Association (23) whereby general practitioners would be paid salaries of $6,000 and specialists $8,000 to $10,000 a year."

The above are two expressions of opinion, one from organized labor, the other from organized agriculture.

As a medical practitioner can you protect your profession's personal interests against such organized bodies as a lone wolf or should you add your weight of influence to that of your neighboring doctor by supporting the only organized body capable of speaking on your behalf?

Certainly, if you remain docilely removed from your Provincial and Dominion associations, you will have no ground for complaint if, when health insurance is established, it is in a form of which you totally disapprove.

The associations need your support and you certainly need their help.

While you remember it—send in your Annual Dues ($15.00) to 510 Medical Arts Building, Winnipeg.

Winnipeg Medical Society

Some of my friends (who cannot, however, always be believed) tell me that I have been challenged to a debate by no less a personage than the Dominion President of the Chiropractors. This interesting news item, if it appeared, escaped my notice. It intrigues me, however, to think that my caustic comments on chiropractic may have come to the notice, and aroused the ire, of the Grand Panjandrum himself.

And yet, perhaps, I speak of this with too much levity. Perhaps I have gone too far already. It might be wiser (and safer) for me to make amends and thereby hope to avert the wrath to come. Afer all it is true that for the most part we condemn chiropractic out of ignorance. What do you, gentle reader, know about that "Science?" "Nothing," you say? Yet when a chiropractor raises his voice do you not avert your stony gaze and say, with Caiaphas, "This man speaketh blasphemy?"

That, you must admit, is neither fair nor scientific. Let us not emulate the critic who would not read the books he reviewed lest the reading might prejudice his opinion. Let us instead learn something about chiropractic and thereby heed the saying of Quintillian: "Judgment on men of such eminence should, however, be pronounced with diffidence and consideration lest, as happens to many, the critics should condemn what they do not understand."

The gods, who in the mythology of every race had much to do with the genesis of the healing art, spurned, or were spurned by, the chiropractors. The origin of this art was a matter of native, intuitive genius rather than the result of divine inspiration; and this native genius can be seen at work in two scenes. The first is the cottage of a Bohemian peasant. The old man is in bed with "doshay bolette"—that common ailment that so often resists our best efforts. At the command of his wife he crawls out of bed and lies upon the floor naked and prone. The old girl, removing her boots, then solemnly walks up and down his back, the number of excursions doubtless depending upon the relative size of the participants and the degree and obstinacy of the "bolette." When the treatment has been completed the patient picks himself up, dresses and goes to work.

The second scene is an American foot ball field. The game is at a most critical stage when something happens to the star player. Seeing his difficulty, five of his team mates rush to him. Four of them, seizing one limb each, violently abduct his extremities while the fifth "pounds or punches his spinal column." The ailment, taken completely off guard by this extraordinary blitz method of treatment, capitulates and the player returns to the game and victory. From scenes like these doth chiropractic spring.

These procedures (which are real and not imagined) and others allied to them, inspired the fertile genius who lives in fame as the "Fountain head of Chiropractic." This gentleman, Palmer by name, was practicing as a "faith" or "magnetic" healer when the idea of spinal adjustment began to fester in his brain. The festering process continued and in the fullness of time, even as Minerva sprang from the head of Zeus, so did chiropractic erupt from the head of Palmer. It may have been that business wasn't too good in the faith healing line. Or perhaps Palmer felt he should give his customers something for their money. Perhaps he had found with St. James, that faith without works is dead and so he proceeded to encourage his patients' faith while he gave them the works.

Thus it came about that "the practice of spinal adjustments was introduced in this country by a man almost wholly unacquainted with Pathology, Symptomatology or Etiology and one who knew practically nothing of Anatomy and but little of Physiology." These are the words of Professor A. A. Gregory, President of the Palmer-Gregory College of Chiropractic referring to Dr. "Fountain head" Palmer.

This strangely begotten addition to the family of Therapies was next endowed with a "philosophy." Philosophy has suffered so much at so many hands that Palmer and his successors probably felt that a few "adjustments" would do her no harm. What emerged after this spine-punching we shall now reveal. For my information upon this point I am indebted to the writings of Dr. Howard, President of the National School of Chiropractic. Dr. Howard being a Ph.C. (Philosopher of Chiropractic) is well fitted to deal with the subject.

"All matter,' says Dr. Howard, "is but a varying expression of the Universal Substance which underlies all things". "All the external phenomena of which our senses take cognizance are but varied expressions of the one Universal force vibrating at different degrees of velocity." "Universal substance, therefore, vibrating at such inconceivable velocity the very contemplation of which staggers and confounds the mightiest intellect, is what produces all external phenomena." Having recovered from the staggers induced by his contemplations he proceeds to consider the rhythmic behaviour of the various viscera, all accomplished "without one conscious thought on our part." In other words All God's Chillun got Rhythm. He sums up thus cryptically: "In view of all this, to what other conclusion can we then come to, than that there does exist a directing and controlling power, presiding over the various groups of this complex and intricate machinery, and to which part instinctively looks for

that superior force which in itself it does not possess? It is on the practical recognition of this truth that our system of Physiological Adjustment has been founded, rightly entitling it to the claim of being not only a science but also a philosophy."

The vibrations on which health and life itself depend arise, we are told, in the brain and pour along the various nerves to the various organs. At the point where each nerve leaves the spine there is a "Sicilian Narrows" where many a good vibration has been sunk. If the convoy can't get through the organ or organs affected become beleaguered garrisons to which health and ease are but memories.

The sweet music of health, then, is the result of Universal Substance, or Universal Force or both, vibrating where and as it, or they, should. But alas! there comes not infrequently into this harmonious Eden a serpent in the form of a subluxated vertebra and then there is no longer healthful music but sweet bells jangled, out of tune and harsh. Let us harken to Dr. Howard again. He is talking about "vibration and functional disturbance." (Proceed Dr. Howard.) "The normal vibrations of the liver are 50,000 per second. One day, however, it happens that the vibrations do not exceed 45,000, a discrepancy that may prove serious. The result is a feeling of discomfort in the organ. The patient grows worse as the days go by and the vibrations get lower and lower." Finally "confusion reigns, the organ ceases to function and the man dies." Alas poor liver—can't you visualise it? Can't you see it dropsically swollen or cirrhotically shrunken, gasping for more vibrations? "Bring back," it wails, "bring back, oh bring back vibrations to me."

But the vibrations are gone with the snows of yesteryear. The despairing cry is unheard or, even worse, is smothered by pills, potions and other "drug poisons." It will go ill with that suffering organ unless we can hurry to its aid with the philosophy and science of Chiropractic. Ah what a change comes then! Running his agile fingers nimbly along the keyboard of the spine the chiropractor swiftly finds the sticking note, dexterously sets it free and leaves the rescued organ purring its gratitude and its praise as the vibrations come surging back. (Celia to Rosalind—"O wonderful, wonderful and most wonderful wonderful, and yet again wonderful and after that out of all whooping.")

You might imagine that in this day and generation it would be difficult even for a chiropractor to ignore germs. He does indeed admit their existence but he will not tolerate them as rivals of his etiological ideas. He therefore relegates them to the position of an effect of disease. I must admit I find this difficult to understand. For example Johnny Smith's 5th cervical and 5th and 10th dorsal vertebrae slip out of place. A few days later spots come out on Johnny and his mother says he has chicken pox. Now, strangely enough, in all Johnny's little playmates there is a simultaneous and sympathetic slipping of C 5 and D 5 and 10. Still more strangely on their own power and without chiropractic assistance they all pop back again in a few days. And then there is tuberculosis. "All cases of pulmonary tuberculosis show a 3rd dorsal subluxation. Correction . . . is in a majority of cases . . . followed by a rapid and radical cure." It's as simple as that.

To give the devil his due, not all chiropractors treat germs in such a cavalier way. Some admit that the subluxation may have pre-existed. Then it paved the way to infection. "No subluxation—no disease."

Thus, "a man has been known to have a 2nd lumbar subluxation for years without effects other than constipation and on the appearance of a typhoid epidemic to contract the disease. Correction of the subluxation effected a cure."

In addition to learning the philosophy of his science the chiropractor must become skilled in detecting and reducing "subluxations." He must also learn "nerve tracing." In practicing this art a knowledge of anatomy is a distinct handicap, for, suiting themselves to the new philosophy and science, the nerves weave their way about the body in a manner unknown to any anatomist from Galen to Thompson. "We often," says Professor Gregory, "trace a tender nerve from directly opposite the 5th dorsal spinous process upward to the region of the throat and often trace it to the region of the eyes." By adjusting D 5 and also C 4 Dr. Gregory has "restored three cases of total blindness." This bedevilled anatomy continues: "Effects of impingement of the 10th dorsal reach the diaphragm and lower parts of the lungs, also the eyelids and tissue around the eyeballs and the muscles of the equilibrium of the eyeballs."

Fortified by such a philosophy, such a science, and such an anatomy, it is not surprising that miracles are commonplace with the chiropractor. "Command, Madame," said a French courtier to Mary Queen of Scots. "If it is possible it is already done; if it is impossible it will be done." And so says the chiropractor to his patient. Here are some tips you may find useful: "For nasal polypi, adjust C 4 and D 5. This will promote absorption of all abnormal tissue." "The proper adjustment for tapeworm is D 5 and 8." "We have reduced prolapse of long standing even when the cervix was protruding. Adjustment L 2 and 4." "The prognosis is good in cross eyes. Adjust mid cervical and D 7 and 10." "Cancer of the liver under medical treatment is absolutely fatal. Under spinal adjustment all cases in primary stages will recover." A good spot to adjust is D 4 because correction of subluxations there cures Abscess of Liver, Ague, Anaemia, Ascetes, Cirrhosis, Gallstones, Cancer of Gallbladder, Diabetes and Constipation. Club feet become ornaments "even after 18 to 20 years of age" by adjusting

the lower lumbar. And if you are color blind get your local chiropractor to adjust your 4th cervical. Even chiropractic, however, has its limits and one prominent authority admits that adjustments will not make the body stronger or better than normal.

It is true that my authorities are not of the most recent but that should not matter. The Philosophy of Plato is still the Philosophy of Plato and so must remain the Philosophy of Chiropractic. The etiological role of Universal Substance despite its vibratory activities is "the solid rock of truth" and cannot have changed. In our own case there is no ailment we could cure 10 or 20 years ago that we cannot cure now. It follows then that what chiropractors could cure at the beginning of the last war they can cure today.

To be sure my authorities had not employed the neurocalometer but they seemed to get along pretty well without it.

So there you have the story of Chiropractic told by "those who know." I have largely let the gentlemen speak for themselves and I think that they, like Gratiano, have said "an infinite deal of nonsense."

Department of Health and Public Welfare

Comparisons Communicable Diseases—Manitoba

(Whites Only)

DISEASES	1943		1942		TOTALS	
	Mar. 28 to April 24	Feb. 28 to March 27	March 26 to April 22	Feb. 26 to March 25	Jan. 1 to Apr. 24,'43	Jan. 1 to Apr. 22,'42
Anterior Poliomyelitis	....	1	2	2	8	7
Chickenpox	132	115	119	227	680	1052
Diphtheria	**22**	**27**	18	19	104	67
Diphtheria Carriers	2	3	....	2	9	4
Dysentery—Amoebic	1	1	....	....	2	....
Dysentery—Bacillary	....	1	4	....	2	4
Erysipelas	3	7	13	11	21	36
Encephalitis	....	1	....	2	2	2
Influenza	20	86	15	19	241	166
Measles	432	279	796	898	970	2887
Measles—German	13	3	29	32	26	192
Meningococcal Meningitis	8	3	2	2	17	11
Mumps	501	544	443	574	2084	1888
Ophthalmia Neonatorum	....	....	....	....	....	1
Pneumonia—Lobar	13	18	15	16	62	52
Puerperal Fever	....	....	1	1	1	2
Scarlet Fever	147	140	192	219	439	669
Septic Sore Throat	3	4	5	17	16	51
Smallpox	....	....	....	....	....	....
Tetanus	....	....	....	....	....	1
Trachoma	....	....	....	1	2	1
Tuberculosis	**46**	**81**	38	42	202	135
Typhoid Fever	2	1	2	....	7	6
Typhoid Paratyphoid	....	....	....	....	....	....
Typhoid Carriers	1	....	....	....	1	1
Undulant Fever	....	....	....	1	1	3
Whooping Cough	291	218	11	28	810	82
Gonorrhoea	141	118	91	91	652	368
Syphilis	37	43	47	86	166	233
Meningococcal Meningitis Carriers	....	....	....	....	6	....

Little change has occurred in the morbidity due to communicable diseases during the month of April. There were twenty-two cases of DIPHTHERIA reported during this period—a drop of five cases.

TUBERCULOSIS—Forty-six cases as compared with eighty-one in the preceding four-week period. Many of these cases are reported from the Reception Centre M.D. 10 and are not active cases.

The spring immunization program is well under way and requests for nursing assistance have swamped that Division. Miss Russell, the Director, is doing her best to fulfill all demands so your program will not be delayed. Those starting programs later than this date will find themselves running beyond the end of the school term. In this regard, it might be mentioned that should you desire to give the first and second doses of toxoid now, before the summer vacation; the third could be given immediately following the commencement of the fall school term. Vaccination against Smallpox is best done on the first or second round so that the result may be recorded on a subsequent visit.

DEATHS FROM COMMUNICABLE DISEASE

March 1943

URBAN—Cancer 44, Pneumonia (other forms) 11, Influenza 8, Tuberculosis 5, Pneumonia Lobar 3, Syphilis 3, Diphtheria 2, Lethargic Encephalitis 2, Septic Sore Throat 2, Whooping Cough 1, Cerebrospinal Meningitis 1. Other deaths under 1 year 23. Other deaths over 1 year 194. Stillbirths 15. Total 314.

RURAL—Cancer 22, Pneumonia (other forms) 15, Influenza 13, Pneumonia Lobar 11, Tuberculosis 9, Whooping Cough 2, Cerebrospinal Meningitis 2, Lethargic Encephalitis 1, Measles 1, Syphilis 1, Hodgkin's Disease 1. Other deaths under 1 year 24. Other deaths over 1 year 169. Stillbirths 9. Total 280.

INDIANS—Pneumonia Lobar 1, Pneumonia (other forms) 9, Tuberculosis 5, Influenza 2, Whooping Cough 2. Other deaths under 1 year 2. Other deaths over 1 year 4. Total 25.

DISEASE	Manitoba Mar. 27-Apr. 24 *737,935	Ontario Mar. 27-Apr. 24 *3,824,734	Saskatchewan Mar. 27-Apr. 24 *905,974	Minnesota Mar. 27-Apr. 24 *2,792,300	North Dakota Mar. 27-Apr. 24 *641,935
Anterior Poliomyelitis	....	....	1	1	....
Chickenpox	132	903	94	216	....
Diphtheria	**22**	**3**	**5**	**7**	**1**
Dysentery—Amoebic	1	....	....	7	....
Dysentery—Bacillary	....	....	....	1	....
Erysipelas	3	9	2	6	....
Influenza	20	268	20	5	18
Measles	432	4343	867	705	344
Meningococcal Meningitis	8	15	1	10	2
German Measles	13	376	24	....	....
Mumps	501	4644	410	....	290
Opthalmia Neonatorum	....	1	....	....	....
Scarlet Fever	147	1081	185	243	20
Septic Sore Throat	3	1	....	....	3
Trachoma	....	....	2	....	3
Tuberculosis	**46**	**221**	**33**	**13**	**17**
Typhoid Fever	2	3	3	1	1
Typhoid Para Typhoid	....	2	....	....	....
Undulant Fever	....	5	....	....	4
Whooping Cough	291	696	59	316	44
Diphtheria Carriers	2	....	....	....	....
Gonorrhoea	141	294	....	....	19
Syphilis	37	474	....	....	21

* Approximate Populations.

Diagnostic Tests for Encephalitis

F. E. McKIM, M.D.

In cases of suspected encephalitis it is recommended that specimens of blood and spinal fluid be submitted to the Virus Laboratory, 193 Aberdeen Ave., Winnipeg. This Laboratory is under the direction of the Department of Health and Public Welfare of Manitoba.

Specimens to be submitted:

1. Blood and spinal fluid collected as soon as possible after the onset of the illness.

2. A specimen of blood collected two weeks after the onset. Further specimens at longer intervals if indicated.

The object of collecting a specimen of blood as soon as possible after the onset of the illness is to obtain the specimen before sufficient time has elapsed for antibodies to develop, *i.e.*, at the time when the antibody titre, if present, is the same as it was before the patient became ill. It has been ascertained that the blood of a certain percentage of healthy persons in Manitoba contains a demonstrable titre of antibodies to Western Equine Encephalitis virus. If an individual of this group developed encephalitis, it would be necessary to compare the antibody titre of the blood obtained late in the course of the disease with that of the blood obtained in the initial stage (corresponding to the level present before illness) in order to determine if the antibody titre had increased. The second specimen of blood should be submitted two weeks after the onset of illness. If indicated, further specimens may be submitted at weekly intervals until the antibodies reach a maximum level.

Specimens of blood should be collected in Keidel tubes. A fasting specimen is preferable, and the blood should be left at room temperature for an hour after collection and then kept in the refrigerator until it can be sent to the laboratory. The specimen should be sent to the laboratory as soon as possible after collection. A gummed label should be affixed to the tube containing the blood. On this label is inscribed the date specimen was collected, name of patient, name and address of the physician, and the name of the disease suspected. A short history of the case including the date of onset of illness should accompany the specimen.

Spinal fluid may be collected in two sterile tubes, one to be used by the physician for a cell count and the other to be sent to the laboratory for testing for the presence of virus. It is advisable for the physician to do the cell count because the cells may disintegrate before the specimen reaches the laboratory. If spinal fluid is to be tested for the presence of virus it should be collected as soon as possible after the onset of the disease.

An investigation of possible vectors of the virus of encephalitis is being carried out in Manitoba, and also a study of the antibody response in patients suffering from encephalitis. Physicians can aid the study of the encephalitis problem by prompt recording of suspected cases to the Department of Health and Public Welfare of Manitoba, and by submitting specimens from such cases to the laboratory for examination.